

MIDDLE ATLANTIC PERSPECTIVE

*Newsletter of the
National Network of Libraries of Medicine*

*Middle Atlantic Region
New York • New Jersey • Pennsylvania • Delaware*

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NEXT GENERATION SERHOLD — NLM's RESPONSE TO SERHOLD REQUEST FOR INFORMATION

By Deena Acton, Systems Librarian, NLM Serial Records Section

Thank you to everyone who took the time to fill out and submit the SERHOLD Request for Information as well as to the SERHOLD Coordinators who took the time to compile the responses and send them to NLM in a very tight timeframe. (Appendix A provides a summary of your responses). We have used many of the comments to help finalize specifications for the SERHOLD and DOCUSER components of NLM's next generation DOCLINE system.

The following attempts to address the major concerns and questions expressed in your responses. If there are other concerns, please send e-mail to Deena Acton (ActonD@mail.nlm.nih.gov).

What is Next Generation SERHOLD?

SERHOLD is the holdings component of DOCLINE, NLM's interlibrary loan request, routing and data management system. DOCUSER is the management component and DOCLINE is the name of both the request and routing component and the overall system. Objectives for the new version of SERHOLD are as follows:

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TECHNOLOGY CONFERENCE — Hold the Date

The University of Pennsylvania Biomedical Library will host this year's NN/LM-sponsored technology conference on March 30, 1999. The topic will be the impact of informatics on genetics research, particularly in the area of cancer genetics. The keynote speaker is Dr. Chris Overton, Director of the Center for Bioinformatics and Associate Professor of Genetics at Penn. The meeting will be held in Philadelphia. Check the MAR web site <<http://www.nlm.nih.gov/mar>> for program information as it becomes available, or contact Anne Seymour at 215-843-2881 or seymoura@mail.med.upenn.edu.

- To provide holdings data to support routing of ILL transactions.
- To improve the quality and timeliness of holdings data by empowering all SERHOLD participants to view and maintain data online.
- To facilitate the exchange of data by conforming to national standards (USMARC, ANSI/NISO Z39.71-199X).
- To provide SERHOLD services and products in a resource effective manner.

SERHOLD, like the other two components, makes use of the ORACLE database management system with a Web interface for viewing, entering and editing data.

The new DOCLINE is Y2K compliant.

Tentative Implementation Time Frame

| | |
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| Feb 1999 | All 1999 SERHOLD Batch Updates submitted to NLM |
| Mar 1999 | All 1999 SERHOLD Product Requests submitted to NLM (due to the elimination of NLM's mainframe, this is the last time requests for microfiche products will be accepted) Testing of new Online SERHOLD completed All 1999 SERHOLD Batch Updates processed |
| Apr 1999 | All 1999 SERHOLD Product Requests processed |
| Jul 1999 | Full implementation of new Online SERHOLD |
| Dec 1999 | New Reports/Products via Online SERHOLD available |
| 2000 | Batch submissions in USMARC, OCLCMARC, and old "SERHOLD Format" to new SERHOLD system accepted; all batch submissions must be sent via ftp. NLM will no longer accept tape submissions — we are discussing the possibility of obtaining ftp products with OCLC. If this isn't possible, we will explore other options. |

Dec 2000

Last batch submissions in old "SERHOLD Format" accepted; batch updates in USMARC and OCLCMARC will continue to be accepted.

Administration

Role of SERHOLD Coordinator — Regional SERHOLD Coordinators are responsible for the coordination of SERHOLD data for an entire region. Regional SERHOLD coordinators establish access and update rights for SERHOLD members in the DOCUSER component of DOCLINE. They may provide data entry services and union list products on a cost recovery basis. They answer questions from users in their region concerning SERHOLD and pass along concerns or questions they cannot answer to the NLM SERHOLD Administrator, Deena Acton.

Some regions use SERHOLD Sub-Coordinators to answer questions and handle data entry or data coordination for certain states or groups of libraries. If you have questions concerning the role of SERHOLD Coordination or SERHOLD Sub-Coordinators in your area, please address them to your Regional SERHOLD Coordinator. A list of Regional SERHOLD Coordinators is located at the end of the SERHOLD factsheet (www.nlm.nih.gov/pubs/factsheets/serhold.html).

Training -- DOCLINE/SERHOLD are designed to be very easy to use and incorporate appropriate online helps. However, if a large number of libraries in the NN/LM feel that additional assistance is needed, some training may be provided.

LIBID — A new LIBID will be assigned to each library. For libraries that currently have holdings in SERHOLD, the LIBID will incorporate the SERHOLD Lib Code.

Cost for Online SERHOLD — NLM provides free access to online SERHOLD. NLM will not charge a participating library to view or edit holdings online in the new SERHOLD, or to print or download its holdings or union lists for consortia of which it is a member.

Regional Medical Libraries or their agents will continue to have the option of charging a cost-recovery fee for providing SERHOLD data entry services or to charge a cost-recovery fee for producing union lists for libraries which desire these services.

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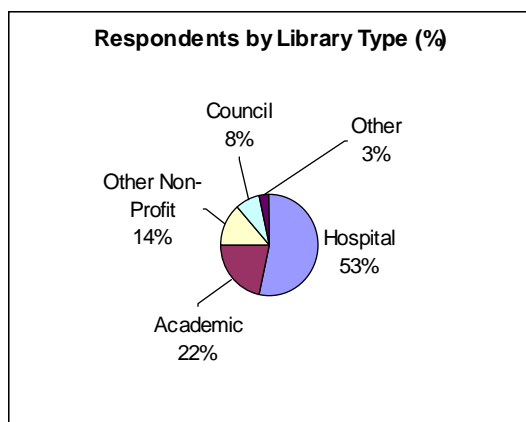
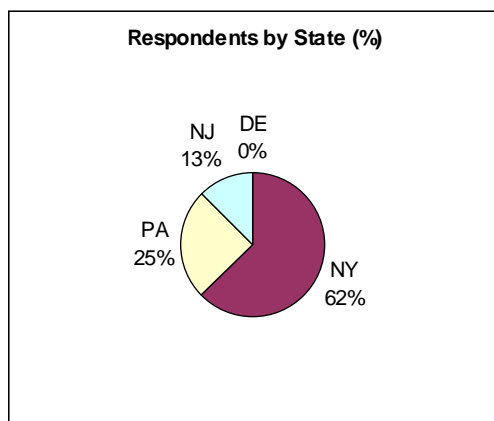
RESULTS FROM THE TRAINING NEEDS ASSESSMENT

By Kris Markovich, Education Coordinator

A regional Training Needs Assessment appeared in the Sept/Oct issue of *Middle Atlantic Perspective* and on the MARL Listserv. Our thanks to the 64 members who responded. The results of this assessment will be helpful as the RML plans its education programming. (This was a 9% response rate based on the number of NN/LM member libraries in this region. However, there are many more librarians than libraries, so it actually represents a somewhat smaller percentage of the potential training audience.)

Background Information

Here is some background information on the 64 respondents by state and type of library:



Methods of Notification

In order to better spread the word about educational opportunities, we asked you what methods of notification would be useful. The top five methods were:

| | |
|---|------------|
| MARL - the Middle Atlantic Regional Listserv | 59% |
| Direct Mail | 47% |
| <i>Middle Atlantic Perspective</i> | 30% |
| MEDLIB-L | 23% |
| Regional Chapter Listservs & Newsletters tied at | 22% |

Each of these methods has its limitations. All future training announcements will be distributed via MARL, but this only reaches members who are subscribed. We encourage all health science librarians with e-mail access to subscribe to this regional listserv. The volume is not overwhelming, and it is certainly the most efficient way for you to get timely information both from the RML office and from the National Library of Medicine. (To subscribe, simply send an e-mail message to: LISTSERV@nyam.org Leave the subject area blank, and in the message area, type: SUBSCRIBE MARL firstname lastname)

Direct mail is expensive and time-consuming. The RML will not be mailing training announcements, but we will share the information with consortia and other local groups that may do print mailings to their members.

The publication schedules of *Middle Atlantic Perspective* and regional newsletters often preclude including training announcements. Whenever feasible, upcoming classes will be announced in the newsletter.

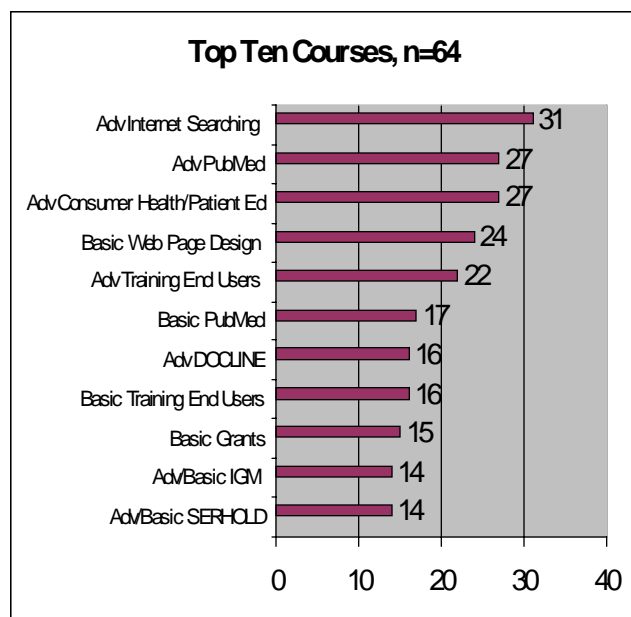
The Classes Themselves

The needs assessment results indicate that the primary factor affecting attending continuing education classes was Location (84%) followed by Subject (73%). Most (84%) respondents preferred Hands-On training, and 66% said that the preferred length of course depends on the subject matter.

This all makes sense to us. It also reinforces the importance of providing training locally, on the topics

you selected, and in hands-on environments whenever possible. In order to do this, the RML needs to identify host sites with computer labs in various part of the region. If you have such a facility and are interested in hosting a class, please contact the Education Coordinator.

The information about what course topics you would like to see offered will be very useful in planning. The Top Ten Courses requested region-wide were:



Some of these courses already exist and can be taught by RML or NLM staff. Others need to be developed. For example, when online SERHOLD and web DOCLINE become available, training in those systems will be offered throughout the region.

We will be using the city, state, and zip code data to identify, more specifically, areas needing certain training topics. Here are the top five courses requested for each state. Note that in several cases there were ties.

NEW JERSEY (n=8)

1. Adv. Training End Users
2. Adv. PubMed (tied)
 - Adv. Internet Searching (tied)
 - Adv. Health Services Research (tied)
 - Basic Grants (tied)

NEW YORK (n=40)

1. Adv. Internet Searching
2. Adv. Consumer/Patient
3. Adv. PubMed
4. Adv. Training End Users
5. Basic Web Page Design

PENNSYLVANIA (n=16)

1. Adv. PubMed
2. Adv. Internet Searching (tied)
 - Adv. Consumer Health/Patient Ed (tied)
 - Basic Web Page Design (tied)
5. Basic Health Services Research (tied)
 - Adv. DOCLINE (tied)
 - Adv. SERHOLD (tied)

This provides some idea of the information we are using to set up training opportunities for 1999. Additional information from the needs assessment and the Request for Training form are available on the MAR web site at <http://www.nlm.nih.gov/mar>. If you have any questions or comments, please contact the Education Coordinator at kmarkovich@nyam.org.

NATIONAL GUIDELINE CLEARINGHOUSE WEB SITE GOES LIVE

The National Guideline Clearinghouse (NGC), an exciting new free Web-based library resource for up-to-date evidence-based clinical practice guidelines, went *live* on the Internet on December 15, 1998 at <http://www.guideline.gov>. Developed by the Agency for Health Care Policy and Research (AHCPR), in partnership with the American Medical Association and the American Association of Health Plans, the NGC is designed to promote quality health care by making available the latest clinical practice guidelines that are based on scientific evidence, all in one easy-to-access location.

Development of clinical practice guidelines has grown rapidly over the last five years. This growth reflects increased interest in improving the quality of clinical practice, reducing uncertainty and variability in health care decision making, and stemming rapidly increasing health care costs. However, many health care practitioners, health care systems, and health care purchasers have difficulty gaining access to and keeping abreast of the many clinical practice guidelines currently in use. Moreover, existing clinical practice guidelines often

differ in development methodology and content, further complicating their use.

Until the NGC, there has been no resource that provides free and comprehensive access to objective detailed information on clinical practice guidelines. The goals of NGC are (1) to provide health professionals, health care providers, health plans, integrated delivery systems, quality assurance programs, and others an accessible mechanism for obtaining objective, detailed information on clinical practice guidelines; and (2) to enhance health care quality by advancing the dissemination, implementation and use of clinical practice guidelines based on scientific evidence.

In addition to its 24-hour access on the Internet, the utility of the NGC is underscored by its useful features:

- Standardized abstracts containing information about each guideline and how it was developed
- A comparison of guidelines covering similar topic areas, listing major interventions addressed, recommendations made, and areas of agreement and disagreement
- The full text of guidelines (when available) or links to full text (when not)
- Topic-related electronic mail groups where registered users can exchange information about aspects of guideline development, content, and implementation.

NGC is expected to have a broad professional audience. Health care systems (e.g., health plans, integrated delivery systems, hospital systems, etc.) are anticipated to be an important audience for NGC. These organizations will be able to use the information contained in NGC to adopt or adapt nationally available guidelines into their systems. In addition, individual health care practitioners and medical specialty and professional societies are expected to make use of NGC. Because individual practitioners must sort through clinical practice guidelines from several different sources covering similar or same conditions, they will benefit from being able to obtain objective information on the similarities and differences between documents. Medical specialty and professional societies will find access to NGC useful in their own guideline development efforts. Clinicians may find NGC useful in their discussions of clinical options for their patients.

State and local governments in their role as health care providers and purchasers also require similar information as part of their quality assurance and oversight responsibilities. As these entities restructure their

health care systems, and move from purchasing and providing health care services under traditional fee-for-service plans to managed care systems, they face significant challenges in how they assure quality services through their contracting, regulatory, and oversight roles.

Employee benefits managers utilize information contained within clinical practice guidelines and similar documents to make more well-informed purchasing decisions when negotiating with health plans for employee health care coverage. Medical and nursing educational institutions also have specific need for information contained within clinical practice guidelines and related products for incorporation into academic curricula and continuing medical and nursing education programs.

The design of the NGC has incorporated previous research funded by the Department of Health and Human Services. The classification system for NGC is derived, in part, from the National Library of Medicine's (NLM) Unified Medical Language System (UMLS). Bi-directional links will exist between NLM's PubMed and Health Services/Technology Assessment Text (HSTAT). The form of the structured abstract of clinical practice guidelines in NGC was based on research funded collaboratively between AHCPR and NLM. The definition of what constitutes a clinical practice guideline was taken from work completed by the Institute of Medicine under the sponsorship of AHCPR.

The Agency for Health Care Policy and Research is the lead agency charged with supporting research designed to improve the quality of health care, reduce its cost, and broaden access to essential services. AHCPR's broad programs of research bring practical, science-based information to medical practitioners and to consumers and other health care purchasers. The National Guideline Clearinghouse is an example of a program to make science-based clinical practice guidelines available to AHCPR's constituent audiences.

USING ANTI-VIRUS SOFTWARE TO SAFEGUARD YOUR PC

By Robert De Angelo, Technical Programs Manager

A computer virus is a software program that can enter your computer's hard drive and "infect" your files. Once present, most viruses attempt to replicate and infect as many files as possible. This begins a vicious cycle, especially if you end up saving an infected file to a disk.

The disk becomes infected as well, and if you pass it on to another user, chances are that their computer will become infected as well. It is estimated that nearly 50% of all infections stem from sharing infected files via floppy/removable disks.

Virus Types

There are four main types of viruses:

1. Boot sector viruses — transmitted when an infected disk is left in a disk drive and the computer is rebooted. The virus is read from the boot sector of the infected disk and written to the master boot record of the hard drive. This boot record is the first place a computer reads from when it is turned on. When the PC is booted up, the virus is loaded into the system memory.
2. File/Program viruses — viral code is attached to the executable program. The virus spreads to the system once the file/program is run.
3. Macro viruses
4. Multi-partite viruses — these viruses have characteristics of both boot and program/file viruses. They can originate in the boot sector and spread to the system, or may start in the program/file and infect the boot sector.

Recently, anti-virus researchers have identified another class of viruses: HTML viruses. HTML viruses are more insidious than most viruses, in that they have the ability to hide in Web pages or e-mail messages and can activate when users simply view the content.

The HTML virus, essentially a macro virus written in VBScript, is embedded in the HTML included in a Web page or an e-mail message. Users of recent versions of Microsoft's Internet Explorer and Outlook software may be at risk since these products are set up with Microsoft's Windows Scripting Host — needed to run VBScript. Microsoft claims that the security ratings feature in IE 4.0, even at its lowest setting, will prompt a user before any script is run from a Web page. At this point, it is up to the user to decide whether or not to continue. Netscape, which does not utilize VBScript, is immune for now. It is believed that they may experience a similar problem with Java in the near future.

At present, these viruses pose little danger. Researchers have only encountered "test viruses," which were not destructive in nature. In addition, these viruses will have

a hard time spreading. In order to copy itself to a new Web page, the HTML virus must execute on a machine from which it is allowed to change the page. Therefore, only webmasters and content developers have the ability to spread the virus to other pages. If you are only a browser or user, you cannot infect other people's Web pages.

How does a system contract a virus?

Viruses can be contracted several ways. Since viruses are themselves software programs, they can be written into most files or software types. There are three main pathways of virus infection:

1. Contracted through sharing a floppy disk or Zip disk that contains an infected file
2. Downloading an infected file from the Internet
3. Opening an infected e-mail attachment (**not** from the plain text message of an e-mail)

Viruses that come inside a file or program (executable file) spread when the file/program is launched. Most people believe that this is the only way for viruses to spread and that if you do not open the infected executable, then there is no danger of infection. That distinction is becoming less certain with the advent of macro viruses. Macro viruses, which are now regarded as the most common type of virus, can exist inside a file whose application utilizes a macro language, such as MS Word or Excel. Opening the infected document can then infect what was previously a clean executable application.

Checking For Viruses on Your Hard Drive

Some signs or symptoms that may indicate a possible virus infection are:

- Unusual system messages and/or displays on your monitor
- A disk or volume name has been changed
- Program files that were on your hard drive are now missing
- Files that previously worked right are now not working or are corrupted
- Unknown programs or files have been created
- There is less available memory on your system than there should be

Regardless of whether you see these symptoms or not, install an anti-virus software package on your computer's hard drive. Use the software to scan your hard drive for the presence of known viruses. If the

software finds infected files, it may offer you the option of “cleaning” the file(s), which may restore it; if not, you will most likely have to delete the infected file to remove the infection from your system.

It is important to remember that anti-virus programs must be kept up-to-date! Since there are 17,000+ strains of viruses out there with over 300 new ones being discovered every month, updating virus definition or signature files for your software is a must in order to obtain protection from current viruses. An outdated program will provide little or no protection from the latest viruses.

In addition to using anti-virus software, following some basic precautions can help to protect your system from infection:

- Every PC and network should have anti-virus software installed. Scan your computer’s hard drive at least once a week.
- Be cautious about downloading and installing new software from the Internet. Make sure it comes from an established source that you trust.
- Configure anti-virus software to scan floppy disks, files downloaded from the Internet, and e-mail attachments to ensure that they are virus-free. Remember that even e-mail attachments sent from friends can unwittingly contain a virus!
- Update anti-virus software and virus signature files often. Check with the software vendor for updates.
- Protect your data, scan and back up clean data to removable disks. Removable storage media such as Iomega’s Zip and Jaz drives, allow you to store 100MB to 1 GB of information on a single disk, making the back-up process an easy task. Networks should have a high speed, automated back-up such as a tape drive. You should create and maintain a consistent back-up schedule. For a network, you will probably need to run daily back-ups and may wish to have it done off-site to provide for some added security. A standard PC’s data should be backed up on a weekly basis.

For more information about antiviral software and information resources, consult the following web sites:

Anti-virus Software Resources

McAfee Total Virus Defense — <http://www.nai.com/>

products/antivirus/

Norton Anti-Virus — http://www.symantec.com/nav/index_product.html

Inoculan Anti-Virus — <http://www6.zdnet.com/cgi-bin/textis/swlib/hotfiles/info.html?fcode=000HT1>

Antiviral Information Resources

National Computer Security Association — <http://www.ncsa.com/>

Virus Bulletin — <http://www.virusbtn.com/>

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Access

Hours of Operation — The new system is scheduled to be operational seven days a week and at least 20 hours a day.

Internet Access — Access to SERHOLD will be via the Internet. Programmers are designing the interface specifically for the web and are optimizing page re-writes, database calls, variable passing, etc., to make it as fast as possible. Both Netscape Navigator 4.0 and Internet Explorer 4.0 will be supported.

Libraries without Internet Access or with poor Internet Access will work through their SERHOLD coordinator to arrange for their holdings to be updated.

Concurrent Access — SERHOLD participants will be assigned a unique login ID and password which, based on their profile, allows them read/write access to Online SERHOLD. If a library has more than one staff member who updates SERHOLD, the library can request the RML to establish a separate account for each such staff member. Each account will be able to access the new SERHOLD at the same time. Other users can have concurrent view access to holdings.

Public Access — The new system gives any web user view only access to a SERHOLD library's holdings unless the library blocks public access. When the new system comes up, any library that wishes to block the general public from viewing its holdings will be able to update its DOCUSER record so that holdings will only be displayed to DOCLINE participants.

Ability to view Holding Library Information from SERHOLD — Information concerning mailing addresses, phone numbers, e-mail addresses, etc., will be available in DOCUSER. Some of this information will also display within the SERHOLD component of the new DOCLINE.

Holdings Data

Search Limits — Users can limit display based on institution, consortia, state/province, or region.

Length — Holdings will be in USMARC format. USMARC does not have a limit on the length of holdings so there is no longer a 50 character limit for a holdings string.

Level 3 vs. Level 4 — Although many respondents liked the idea of recording holdings at the issue level (Level 4), NLM has decided not to accept issue level holdings at this time. This decision was reached because of the tight timeframe for implementing this new system and the concern that possible improvements to routing would not counterbalance the increased resources required to collect, maintain and route on Level 4 holdings.

Transfer of Data from Current to New System — NLM will convert Level 3 holdings from old SERHOLD format to USMARC Holding Format. Level X holdings will be converted to Level 2 USMARC Holdings Format — this means that there will be holdings information only at the title levels (i.e. that the title is currently or not currently received). Therefore, we strongly recommend that libraries convert their Level X holdings to Level 3 as soon as possible. By the end of November, NLM will provide Regional SERHOLD Coordinators with lists of Level X holdings. The Regional Coordinators will then decide how to deal with these holdings by library. When the new system is implemented, any library which has not yet converted its holdings to Level 3 will be able to produce a report that will list all its titles with holdings reported at Level 2.

Limited Retention Statements — Limited Retention Statements are part of USMARC Holdings Format and will be used in the new SERHOLD.

Holdings for Electronic Journals — As with print publications, a library may report holdings for electronic journals only if it is willing to service loan requests for citations from those publications.

Title Changes — NLM will run a nightly program to identify all records with title changes. New holdings will be created for libraries which currently receive the old title. If NLM has holdings for the old title, the program will close the old title for holding libraries with the last volume that NLM holds; if NLM does not hold the title, holdings for the old title will remain untouched.

Call Number Information — An option for including participants' call numbers will not be provided at this time.

Updating SERHOLD

Online Update (Interactive update via a Web Interface) — Any library that wishes to do so may input and maintain its own holdings online. As discussed

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**REGION 1 DOCUMENT DELIVERY PROVIDERS
1999**

| RESOURCE LIBRARIES | |
|--|---|
| <p>Regional Medical Library The New York Academy of Medicine 1216 Fifth Avenue New York, NY 10029 LIBID: 10029B Librarian: (212) 822-7300 ILL: Stephen Chiaffone (212) 822-7296 FAX: (212) 722-7650 ARIEL: ariel.nyam.org</p> <p>Columbia University Augustus C. Long Health Sciences Library 701 West 168th Street New York, NY 10032 LIBID: 10032A Librarian: Susan Jacobson (212) 305-3688 ILL: Rosario Recio (212) 305-4082 AV: Elizabeth Larue (212) 305-1408 FAX: (212) 234-0595</p> <p>Health Sciences Library SUNY at Buffalo Abbott Hall, 3435 Main Street Buffalo, NY 14214-3002 LIBID: 14214C Director: Gary D. Byrd, Ph.D. (716) 829-3402 ILL: Cindy Bertuca (716) 829-3351 AV: Lori Widzinski (716) 829-3614 FAX: (716) 835-4891 ARIEL: ariel4.lib.buffalo.edu</p> <p>SUNY Health Sciences Center at Syracuse Library 766 Irving Avenue Syracuse, NY 13210 LIBID: 13210A Library Director: Laurie Thompson (315) 464-4582 ILL: Cathy Whaley (315) 464-5116 AV: Christine Kucharski (315) 464-5667 FAX: (315) 464-7199</p> | <p>University of Medicine & Dentistry of New Jersey, George F. Smith Library of the Health Sciences 30 Twelfth Avenue Newark, NJ 07103-2854 LIBID: 07103A Librarian: Judith S. Cohn (973) 972-5498 ILL: Robert Cupryk (973) 972-7456 AV: Yini Zhu (973) 972-4876 FAX: (973) 972-6949 ARIEL: 130.219.2.107</p> <p>University of Pennsylvania Biomedical Library Johnson Pavilion 36th & Hamilton Walk Philadelphia, PA 19104-6060 LIBID: 19174B Librarian: Valerie Pena (215) 898-8020 ILL: James McCloskey (215) 898-4111 FAX: (215) 898-8344 ARIEL: ariel.biomed.upenn.edu</p> <p>Health Sciences Library System Falk Library of the Health Sciences Scaife Hall, Second Floor University of Pittsburgh Pittsburgh, PA 15261 LIBID: 15261A Librarian: Patricia Mickelson (412) 648-2036 ILL: Barbara May (412) 648-2037 AV: Frances Yarger (412) 648-8955 FAX: (412) 648-9020 ARIEL: 136.142.56.30</p> |

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| AREA LIBRARIES | |
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| <p>Albany Medical College Schaffer Library of the Health Sciences 47 New Scotland Avenue Albany, NY 12208 LIBID: 12208A Librarian: Sherry A. Hartman (518) 262-5586 ILL: Heather Masi (518) 262-5531 AV: Gail Botta (518) 262-5791 FAX: (518) 262-5820</p> <p>Albert Einstein College of Medicine D. Samuel Gottesman Library 1300 Morris Park Avenue Bronx, NY 10461 LIBID: 10461A Librarian: Judie Malamud (718) 430-3108 ILL: Joel Muranelli (718) 430-3122 FAX: (718) 430-8795</p> <p>College of Physicians of Philadelphia 19 South 22nd Street Philadelphia, PA 19103 LIBID: 19103C Librarian: Marjorie Smink (215) 563-3737 ext. 265 ILL: Mary Laskow (215) 563-3737 ext. 258 FAX: (215) 561-6477 ARIEL: 208.38.83.254</p> <p>Cornell University Medical College Library 1300 York Avenue New York, NY 10021 LIBID: 10021A Librarian: Robert Braude, Ph.D. (212) 746-6070 ILL: Stephen Bright (212) 746-6051 FAX: (212) 746-6494 ARIEL: 140.251.2.219</p> | <p>Delaware Academy of Medicine Lewis B. Flinn Library 1925 Lovering Avenue Wilmington, DE 19806 LIBID: 19806A Librarian: Gail P. Gill (302) 656-1629 ext. 243 ILL: Ellen M. Justice (302) 656-6398 FAX: (302) 656-0470</p> <p>MCP Hahnemann University Hahnemann Library 245 North 15th Street, M.S. #449 Philadelphia, PA 19102-1192 LIBID: 19102A Director: Lenore Hardy (215) 762-7022 Site Coordinator: Judy Baker (215) 762-7632 ILL: Lynda Sadusky (215) 762-7630 FAX: (215) 762-8180 ARIEL: libill.hahnemann.edu</p> <p>Florence A. Moore Library of Medicine 3300 Henry Avenue Philadelphia, PA 19129 LIBID: 19129B Director: Lenore Hardy (215) 762-7022 Site Coordinator: Linda Katz (215) 842-7375 ILL: VACANT (215) 842-6910 FAX: (215) 849-1380 ARIEL: moariel.library.upenn.edu</p> <p>Eastern Pennsylvania Psychiatric Institute Library 3200 Henry Avenue Philadelphia, PA 19129 LIBID: 19129A Director: Lenore Hardy (215) 762-7022 ILL: Randall Blackwell (215) 842-4509 FAX: (215) 849-0820 ARIEL: mcp-ariel.medcolpa.edu</p> |

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| <p>Medical Library Center of New York 5 East 102nd Street, Seventh Floor New York, NY 10029 LIBID: 10029F Director: Lois Weinstein (212) 427-1630 ILL: Bernardo Santiago (212) 427-1630 FAX: (212) 876-6697</p> | <p>New York State Psychiatric Institute Library 1051 Riverside Drive New York, NY 10032 LIBID: 10032B Librarian: David Lane (212) 543-5672 ILL: Luis Minaya (212) 543-5675 FAX: (212) 543-5673</p> |
| <p>Memorial Sloan-Kettering Cancer Center Medical Library, Nathan Cummings Center 1275 York Avenue New York, NY 10021 LIBID: 10021F Director: Katherine Stemmer-Frumento (212) 639-8487 ILL: Diana Delgado (212) 639-7441 FAX: (212) 717-3048</p> | <p>New York University Dental Library 345 East 24th Street New York, NY 10010 LIBID: 10010H Director: Van Afes (212) 998-9787 ILL: Ruben Sosa (212) 998-9799 FAX: (212) 995-3529</p> |
| <p>Mount Sinai School of Medicine Levy Library Box 1102 One Gustave L. Levy Place New York, NY 10029 LIBID: 10029G Librarian: Lynn Kasner Morgan (212) 241-7892 ILL: Celia Soto (212) 241-7795 AV: Merril Schindler (212) 241-7091 FAX: (212) 831-2625</p> | <p>New York University Medical Center Medical Library 550 First Avenue New York, NY 10016 LIBID: 10016D Librarian: Karen Brewer, Ph.D. (212) 263-5393 ILL: Joan Himmel (212) 263-5388 FAX: (212) 263-8196</p> |
| <p>New York Medical College Medical Sciences Library Basic Science Building Valhalla, NY 10595 LIBID: 10595C Librarian: Diana Cunningham (914) 594-4207 ILL: Arlene Miller (914) 594-4200 FAX: (914) 594-3171</p> | <p>Pennsylvania Hospital Medical Library 800 Spruce Street - 3 Pine Philadelphia, PA 19107 LIBID: 19107B Manager: Mary McCann (215) 829-3998 ILL: Donna Quinn (215) 829-5436 FAX: (215) 829-7155</p> |

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|---|---|
| <p>University of the Sciences in Philadelphia Joseph W. England Library 4200 Woodland Avenue Philadelphia, PA 19104 LIBID: 19104A Librarian: Mignon Adams (215) 596-8960 ILL: Nicole Duncan-Kinard (215) 596-8969 AV: Nicole Duncan-Kinard (215) 596-8969 FAX: (215) 596-8760 ARIEL: 208.7.150.34</p> <p>Rockefeller University Library 1230 York Avenue RU Box 263 New York, NY 10021 LIBID: 10021E University Librarian: Patricia E. Mackey (212) 327-8909 ILL: Angela Matthews (212) 327-8916 FAX: (212) 327-7840</p> <p>Roswell Park Cancer Institute Dr. Edwin A. Mirand Library Elm & Carlton Streets Buffalo, NY 14263 LIBID: 14263B Librarian: Gayle Ablove (716) 845-5966 ILL: Gayle Ablove (716) 845-5966 FAX: (716) 845-8699</p> | <p>University at Stony Brook Health Sciences Library P.O. Box 8034 S.U.N.Y. Stony Brook, NY 11794-8034 LIBID: 11733A Librarian: Spencer Marsh (516) 444-3101 ILL: Miriam Swank (516) 444-3105 FAX: (516) 751-5809</p> <p>SUNY Health Science Center at Brooklyn Medical Research Library of Brooklyn 450 Clarkson Avenue Brooklyn, NY 11203 LIBID: 11203D Librarian: Richard Winant, Ph.D. (718) 270-7411 ILL: Julie Semkow (718) 270-7440 FAX: (718) 270-7468</p> <p>University of Rochester School of Medicine and Dentistry -- Edward G. Miner Library 601 Elmwood Avenue Rochester, NY 14642 LIBID: 14642A Director: Julia Sollenberger (716) 275-5194 ILL: Sandra Charchalis (716) 275-5787 FAX: (716) 275-4799 ARIEL: pc07.miner.rochester.edu</p> |

Next Generation SERHOLD ... continued from p. 8

above, if a library is unable to maintain its own holdings online, it may arrange for another institution to assume this responsibility. **Holdings are updated immediately**, and DOCLINE will be able to read the revised holdings as soon as the changes are made.

Batch update — Batch holdings are uploaded to NLM annually; if holdings change during the year and are not maintained online, the holdings remain unchanged until the following **annual update**. NLM will accept an initial batch input from new SERHOLD libraries with significant holdings and an annual batch update from current users who cannot switch to online or new members of a consortium which currently contributes batch data.

All data in the new SERHOLD system will be stored in USMARC format. After February 1999, NLM will no longer accept tapes. Instead all batch update files will be directly uploaded to the NLM system using a product called Cold Fusion rather than ftp software. Through the year 2000, NLM will continue to accept SERHOLD format holdings via batch for conversion to USMARC. After 2000, participants will have to change their method of update to either online input, OCLC/MARC batch input, or USMARC batch input. Revised specifications for submission of data in USMARC format will be available and will place the new specifications on the web in 1999 (probably around the end of summer). Instructions on this process will be provided at the same time.

Double-keying of Information — Several respondents expressed concern that they would have to double-key or triple-key information. For currently received holdings, there should be little, if any update, of a library's holdings. Once a library has its holdings in SERHOLD, changes to holdings should occur only if a library stops receiving a title, the title changes, a new title is added, a gap is received, or a gap is discovered. Unless a collection is very fluid, most libraries should be able to keep their holdings up-to-date with minimal staff intervention.

Products

Currency — Products will reflect titles and holdings as of the time the search query is executed. System constraints may preclude same day delivery.

Title changes — Individual libraries will be able to run an on demand report of NLM Title Changes by specific institution, consortia, state/province, or region for a user-defined date range.

Individual Holdings Lists — With the new system, NLM will offer each participant the ability to print or download a list of its own holdings on demand.

Union List Products — Each library will have the ability to retrieve union lists for consortia of which the library is a member. Some consortia may offer the option of printing and distributing SERHOLD Union Lists for their own members so that each member does not have to print out its own copy, and they may charge a nominal fee for cost recovery. NLM will not offer microfiche products.

Format — Each library will be able to select from among a list of specified fields those to appear on its products. Since bibliographic information carried in the USMARC record may differ in content, field name, or format from information currently carried in the SERLINE record, some of the fields necessarily will be different from those which now appear on union list products. For example, volume, issue, and year information previously recorded in the FL (first/last) field will be replaced by year information in the USMARC Begin Date and End Date fields. Most of the information previously carried in the General Notes field in SERLINE will now be distributed among the appropriate MARC fields. As a result of these changes, third party programs currently used to manipulate union list data received from NLM will require some modification.

Output — SERHOLD libraries can choose to print a product, store it as an ASCII file for manipulation and/or later printing, or receive it in USMARC format. A delimited format option **MAY** be available in the future.

Criteria for Addition of Titles to SERHOLD

Bibliographic information for titles in SERHOLD resides in the National Library of Medicine's own bibliographic database.

SERHOLD participating libraries in the United States and Canada may propose serial titles for addition to the database if they meet one or more of the following criteria:

Substantive currently published or ceased journals which assist in health care delivery in the fields of biomedicine, health care delivery, natural sciences, life sciences and related topics or peripheral subjects such as botany, agriculture, general education, mathematics, linguistics, statistics and administration and management journals.

Other substantive journals which are currently offered on interlibrary loan by biomedical institutions to health care professionals to assist them in fulfilling their roles as educators, researchers, or practitioners.

Electronic resources in serial format will be added with the understanding that the reporting libraries commit to servicing loan requests for citations from those publications.

Excluded from the above criteria are journals which are purchased to provide recreational reading for health professionals or their patients or serials which are not usually provided through interlibrary loan. Because SERHOLD is primarily for routing of interlibrary loan requests, NLM does not encourage the addition of newsletters and other publications which do not conform to standard scientific style, have no citable articles or potential for indexing. Similarly catalogs, directories, reports and reference works, particularly in subjects peripheral to medicine will not be added.

NLM reserves the right to make final decisions on the addition or exclusion of any title.

Appendix A SERHOLD Request for Information Responses

| Region | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 20 | Total |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Responses | 93 | 58 | 38 | 32 | 105 | 49 | 47 | 33 | 12 | 467 |
| # of Libraries | 535 | 606 | 641 | 242 | 173 | 162 | 383 | 291 | 185 | 3218 |

1a) With the implementation of the new Online SERHOLD System, does your library plan to maintain its holdings online?

| Region | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 20 | Total |
|-----------------------|----|----|----|----|----|----|----|----|----|-------|
| Yes | 77 | 50 | 32 | 26 | 88 | 46 | 46 | 28 | 10 | 403 |
| No | 10 | 7 | 3 | 4 | 10 | 1 | 1 | 1 | 2 | 39 |
| Don't Know/ No Answer | 6 | 1 | 3 | 2 | 7 | 2 | 0 | 4 | 0 | 25 |

1b) Does your library plan to submit its holdings to a SERHOLD Coordinator to update?

| Region | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 20 | Total |
|-----------------------|----|----|----|----|----|----|----|----|----|-------|
| Yes | 44 | 25 | 11 | 8 | 31 | 8 | 5 | 11 | 4 | 147 |
| No | 37 | 29 | 6 | 16 | 62 | 39 | 42 | 16 | 8 | 255 |
| Don't Know/ No Answer | 12 | 4 | 21 | 8 | 12 | 2 | 0 | 6 | 0 | 65 |

2) If NLM also provided the ability to report holdings at Level 4, would your library be interested in maintaining its holdings at that level?

| Region | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 20 | Total |
|-----------------------|----|----|----|----|----|----|----|----|----|-------|
| Yes | 66 | 40 | 27 | 19 | 59 | 36 | 25 | 18 | 7 | 297 |
| No | 25 | 17 | 11 | 10 | 43 | 13 | 22 | 14 | 5 | 160 |
| Don't Know/ No Answer | 2 | 1 | 0 | 3 | 3 | 0 | 0 | 1 | 0 | 10 |

3a) Since NLM plans for all SERHOLD members to have read access to all holdings online, is there a need to have union list products?

| Region | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 20 | Total |
|-----------------------|----|----|----|----|----|----|----|----|----|-------|
| Yes | 40 | 19 | 17 | 22 | 38 | 17 | 27 | 16 | 9 | 205 |
| No | 46 | 36 | 18 | 9 | 65 | 31 | 20 | 15 | 3 | 243 |
| Don't Know/ No Answer | 7 | 4 | 3 | 1 | 2 | 1 | 0 | 2 | 0 | 20 |

If yes, why?

General Consensus: Ease of use, availability especially when computers are down, lack of equipment, convenience.

3b) If union lists are still needed by SERHOLD libraries, NLM is considering establishing a web-site that will be updated annually where SERHOLD Coordinators can get union lists via ftp. Will this approach work for your library?

| Region | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 20 | Total |
|-----------------------|----|----|----|----|----|----|----|----|----|-------|
| Yes | 75 | 46 | 27 | 28 | 90 | 44 | 39 | 25 | 10 | 384 |
| No | 7 | 3 | 4 | 2 | 11 | 1 | 6 | 3 | 2 | 39 |
| Don't Know/ No Answer | 11 | 9 | 7 | 2 | 4 | 4 | 2 | 5 | 0 | 44 |

If no, why not?

General Consensus: Lack of appropriate equipment and fire walls.

3c) Do individual member libraries need an annual listing of their holdings for update purposes?

| Region | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 20 | Total |
|-----------------------|----|----|----|----|----|----|----|----|----|-------|
| Yes | 61 | 38 | 27 | 26 | 78 | 42 | 36 | 25 | 12 | 345 |
| No | 27 | 15 | 6 | 6 | 25 | 7 | 9 | 6 | 0 | 101 |
| Don't Know/ No Answer | 5 | 5 | 5 | 0 | 2 | 0 | 2 | 2 | 0 | 21 |

3d) What is the preferred format for product output?

| Region | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 20 | Total |
|-----------------------|----|----|----|----|----|----|----|----|----|-------|
| ASCII | 62 | 38 | 20 | 19 | 72 | 35 | 41 | 17 | 8 | 312 |
| USMARC | 14 | 18 | 9 | 6 | 22 | 15 | 6 | 6 | 2 | 98 |
| Don't Know/ No Answer | 17 | 2 | 9 | 7 | 7 | 0 | 0 | 10 | 2 | 54 |

4) With the new SERHOLD/DOCLINE would libraries have a use for recording their own call number along with their holdings?

| Region | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 20 | Total |
|-----------------------|----|----|----|----|----|----|----|----|----|-------|
| Yes | 13 | 11 | 9 | 7 | 18 | 11 | 11 | 3 | 3 | 86 |
| No | 69 | 41 | 26 | 24 | 79 | 36 | 36 | 30 | 9 | 350 |
| Don't Know/ No Answer | 11 | 6 | 3 | 1 | 8 | 2 | 0 | 0 | 0 | 31 |

MOLECULE VISUALIZATION FREWARE AND THE NCBI STRUCTURE DATABASE

By Andrew Hamilton, Online Analyst

The National Center for Biotechnology Information provides free access to 3D structures records found within its Entrez Integrated Database System. The Biomolecule 3D Structure Database may be one of the smaller databases found on Entrez, but each record contains a wealth of information for the Molecular Biologist. Internet users need a WWW browser such as Netscape Navigator or Microsoft Internet Explorer to see the graphic representations of pages written in HTML. In the same fashion, a specific software package is required to allow a user to translate the computer code for the 3D structures found in Entrez into a visual format. A molecule visualization software application must be installed and configured before a user can see the 3D structures available from Entrez. **Cn3d** and **RasMol** are two of the more popular molecule viewers and are available as freeware via the WWW. RasMol is also available as a Netscape plug-in called **Chime** which provides an easy way to view 3D structures within a WWW frame environment.

The NCBI has an application page at www.ncbi.nlm.nih.gov/Structure/helprapp.html which provides links and instruction on the downloading and installation of the various viewers for the NCBI 3D structure database. The process of downloading, installing, and configuring either of these viewers can and will vary according to the configuration of your computer and the WWW browser you use to access Entrez.

If you have difficulty downloading, installing, and configuring one of these applications, ask your systems support staff for assistance. Structure records in Entrez can be accessed in two ways:

1. Direct searching of the 3D structure database
<http://www.ncbi.nlm.nih.gov/Entrez/structure.html>
2. Searching via PubMed using the "Biomolecule 3D Structure" pop-up menu option.
<http://www.ncbi.nlm.nih.gov/PubMed/>

The following search has been conducted using the PubMed option listed above.

The search retrieves six 3D structure records. The **Structure Summary** of the first record retrieved is displayed below. The summary provides basic information about the molecule and links to other information in Entrez such as records of the individual protein chains from the Protein database that are found in the structure, the MEDLINE references which discuss the molecule, and organisms from which the structures were derived.

MMDB ID: 8033 PDB ID: 1A2M

Protein Chain: [A-B](#)

MEDLINE: [Pubmed](#)

Taxonomy: [A-B Human immunodeficiency virus](#)

PDB Authors: L Hong, X-J Zhang, S Foulding, J A Hartwick, B J Tang

PDB Deposition: 8-Apr-99

PDB Class: Aspartyl Protease

PDB Compound: G418 Mutant HIV-1 Protease In Complex With A Peptide Inhibitor U-05266 Aspartyl Protease, Drug Resistant, Mutation 160-161

Sequence Neighbors: [A-B](#)

Structure Neighbors: [A-B](#)

[View / Save Structure](#) [Get Cn3D 2.8 Now!](#)

Options: ☐ Launch Viewer ☐ Cn3D v2.8 (new) ☐ Cn3D School ☐ Up to 5 Models

☐ Free File ☐ Cn3D v1.8 (new) ☐ Virtual Bond Model ☐ Up to 10 Models

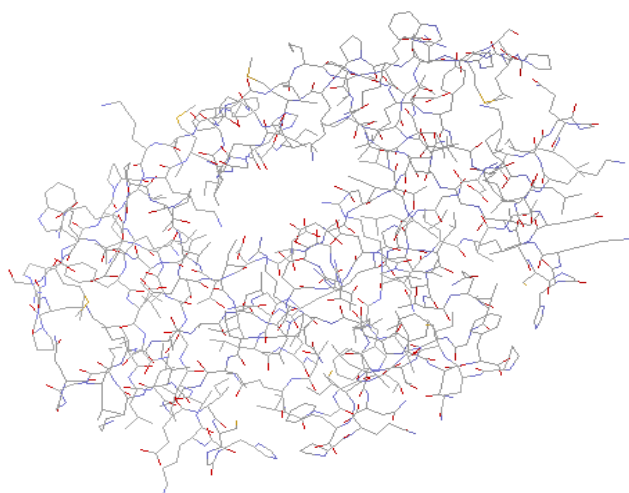
☐ Save File ☐ Mops ☒ All Atoms Model ☐ All Models

☒ RasMol (PDB)

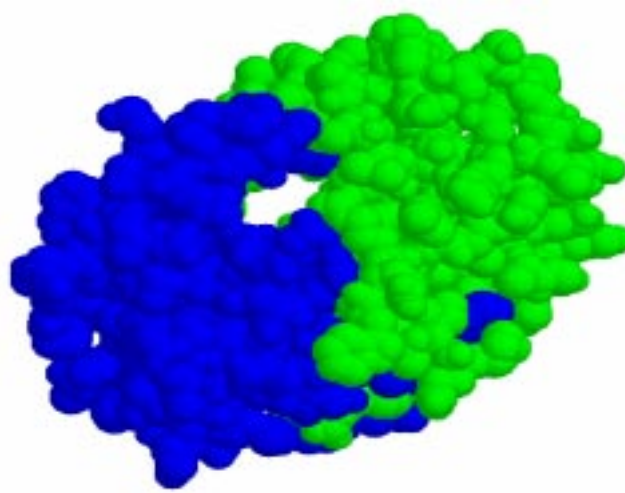
The View/Save options give the user the ability to specify the viewer and level of complexity desired to immediately view a 3D structure or save it to be viewed at a later time using one of the viewing options listed on this page.

The following page shows screenshots of the 3D structure of the HIV Protease described on this page viewed via the RasMol application.

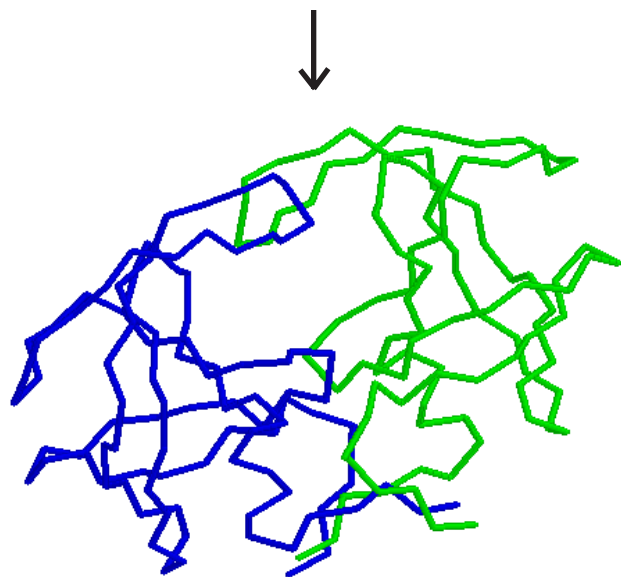
Images of the G48h mutant of HIV-1 Protease



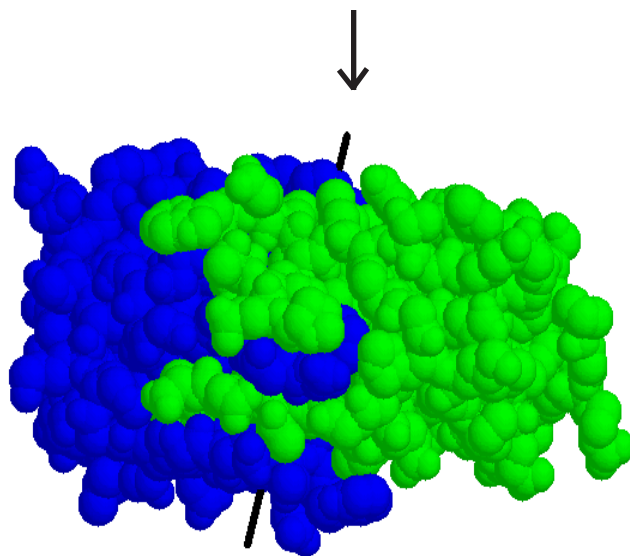
Original wireframe display mode and monochrome color rotated to expose active site of molecule (seen as the hole slightly above the center of the molecule)



Molecule as viewed after changing to "spacefill" display mode & "chain" color format



Molecule as viewed after changing to "backbone" display mode and "chain" color format.



Molecule as viewed after rotating the molecule up to view of the junction between the two proteins

NOTE: I have added the line through the molecule marking the approximate location and alignment of the active site.

These static paper-based gray-scale screenshot images simply do not do justice to all of the permutations of rotational position, display mode and color formats available with the interactive image in either the RasMol or the Cn3d viewer, but should serve as examples to give you a feel for the possibilities these packages provide for the librarian or researcher interested in 3D structures.

The **Structure Summary** for each molecule displays the results of two NCBI algorithms called BLAST and VAST that find other proteins in Entrez which either share sequence homology (BLAST) or structural similarity (VAST) to the displayed record. These links take the user to **Sequence Neighbors** and **Structure Neighbors** calculated for the constituent parts of each structure. These algorithms can be quite useful to a researcher who wants to locate other proteins which may share similar properties with a specific protein. The **Sequence Neighbor** link provides a list of homologous proteins as calculated by the BLAST algorithm from the Entrez Protein Sequence database. Many of these proteins found in the **Sequence Neighbor** link do not contain structural information. The **Structure Neighbor** link provides more than a list and links to structurally related

proteins as calculated by the VAST algorithm. Entrez gives the ability (currently available in Cn3d 2.0) to simultaneously examine multiple structures and their corresponding sequences from this list (see below). This is not done with separate images, but is carried out by overlapping the selected structures to highlight the structural relationship between the molecules. Cn3d 2.0 also provides a separate window containing an interactive table showing the amino acid sequences of the selected proteins. This type of computer aided analysis allows for the comparative examination of structurally similar proteins and is one of the many valuable features which have been developed by NCBI to further the study of the structure and function of biologically important molecules.

Using the Structure Neighbor link to view homologous structures simultaneously via Cn3d 2.0

Structures similar to MMDb [8033](#), 1A9M chain B

G48h Mutant Of HIV-1 Protease In Complex With A Peptide Inhibitor U-89586 Aspartyl Protease, Drug Resistant, Mutation 164, 1. Molecule HIV-1 Protease, Chain: A, B, Engineered, Tet. Mutation: G48h.

| View / Save Alignments | | Go Cn3d 2.0 Now! | |
|--|---|--|---|
| Options: | | Views: | Complexity: |
| <input type="checkbox"/> Launch Viewer | <input type="checkbox"/> Go To: 0 (pos 1) | <input type="checkbox"/> Aligned Chains only | <input type="checkbox"/> Alpha Carbons only |
| <input type="checkbox"/> See File | <input type="checkbox"/> Map (Entrez) | <input type="checkbox"/> All Chains | <input type="checkbox"/> All Atoms |
| <input type="checkbox"/> Save File | <input type="checkbox"/> (PDB) | | |

| PDB | C | D | RESID | RES | 4d | Description |
|----------------------|-------------------|---|-------|-----|-----|---|
| 1A9M | A | | 33 | 37 | 434 | Human Immunodeficiency Virus Type 1 (HIV-1) Protease Complexed With The Inhibitor Bz-1906 Containing The Hydroxylase Dipeptide Inhibitor |
| 1A9M | B | | 15 | 66 | 167 | Asp Protease (Feniloxypyrrol) (E.C.3.4.23.26) Complex With Phosphonate Inhibitor Methyl (cyclo-7(2))- (3H-7(4)) Amino-2-(Hydroxy-(10)-1-Methoxycarbonyl-2-Phosphoryl)-Phosphoryl-2(10)-1-Naphthalenesulfonate], Sodium Salt Feniloxypyrrol, Phosphonate Inhibitor, Hydroxylase 164, 1. Molecule Feniloxypyrrol, Chain: 164, Ec: 3.4.23.26 |
| 1FIV | A | | 11 | 91 | 284 | Molecule Feline Immunodeficiency Virus Protease, Ec: 3.4.23.16 |
| 1B9F | A | | 14 | 71 | 299 | Rous Sarcoma Virus Protease (RSV PR) |
| 1B9F | B | | 21 | 43 | 163 | Ribonuclease S (E.C.3.1.27.7) Mutant With Met 15 Replaced By Alpha-Amino-Normal-Butyric Acid (M15ba) |

Clicking the Structure Neighbor list for G48h HIV-1 Protease - Chain B on the structure summary page displays the page on the left containing the five related sequences as calculated by the VAST algorithm.

Selecting the Cn3d 2.0 viewer and the desired level of complexity, we mark the FIV protease box and click on the “View/Save Alignments” button to simultaneously view the structures and sequences of both molecules in Cn3d 2.0 (see below).

1A9M_B

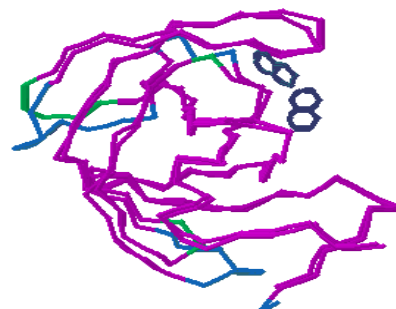
File Edit View Features Alignment

Go to: 0 Look of: 4

1A9M_B Position: 0

| | | | | | | | | |
|--------|----|-----------|----|-----------|-----|-----------|-----|----------|
| 1A9M_B | 1 | --PHTLWGR | 10 | PLTIRIQQQ | 20 | LRALLSTDA | 30 | STVLEHSL |
| 1FIV_A | 1 | YHTTLWR | 10 | PLTIRIQQQ | 20 | LRALLSTDA | 30 | STVLEHSL |
| 1A9M_B | 39 | ---VVF | 50 | QNHGIGGFI | 60 | TPRQVQILL | 70 | ELC---- |
| 1FIV_A | 41 | QKKAALGR | 50 | QNHGIGGFI | 60 | TPRQVQILL | 70 | ELC---- |
| 1A9M_B | 78 | KAIGTVLQ | 90 | ---TPVHIS | 100 | MLLIQIKET | 110 | LVF |
| 1FIV_A | 81 | CIQVQVQL | 90 | ---TPVHIS | 100 | MLLIQIKET | 110 | LVF |

Comparative amino acid sequences and overlapping backbone structures of the B chains of HIV-1 and FIV Protease



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